

## Safety Advisory Committee

January 8, 2015

10:00 – 11:00 AM

### Minutes

Committee Member	Representing	Present
V. Potapenko, M. O. Leimer, J. Willen	Human Resources Advisors	X
Blodgett, Paul M.	Environment, Health and Safety Division	
Bluhm, Hendrik	Chemical Sciences Division	X
Chernowski, John	Facilities Division	
Christensen, John N.	Earth Sciences Division	X
Franaszek, Stephen	Genomics Division	
Giuntoli, Patricia	Computing Sciences Directorate	
Greiner, Leo	Nuclear Science Division	X
Haber, Carl	Physics Division	X
Martin, Michael C.	Advanced Light Source Division	X
MacGowan, Elizabeth	Computing Sciences & Information Technology	X
Ravani, Shraddha	Life Sciences Division	X
Sauter, Nicholas	Physical Biosciences Division	X
Schmid, Andreas	Materials Sciences Division	X
Seidl, Peter	Accelerator Technology and Applied Physics Division; SAC Chair	X
Thomas, Patricia M.	Safety Advisory Committee Secretary	X
von der Lippe, Henrik	Engineering Division	X
<i>vacant</i>	Environmental Energy Technologies Division	

**Others Present:** Paul Alivisatos, Stephanie Collins, Mike Kritscher, Bob Mueller, Martin Neitzel, Mark Scott, Mary Sidney (for EETD), Horst Simon, Scott Taylor, Marty White, Chris Yetter

### Comments from the Chair – Peter Seidl

- **New people** – Shraddha Ravani will represent Life Sciences Division.

### SAC Discussion with LBNL Director – Peter Seidl

### SAC Activities

Issues that are currently in the “pipeline” for EHS and SAC collaboration include:

- Electrical safety program -- major revision;
- Traffic safety program and policy -- major revision;
- Construction safety-- major revision;
- Pressure safety & cryogenics program -- major revisions;
- Hoisting and rigging program -- minor changes;

- Sharps safety – new policy and program;
- Roof access – new policy and program;
- Laser safety program – major revision;
- Fall protection program – major revision;
- On-the-job training requirements; and
- Radiation control manual -- new requirements and reformatting.

When SAC last met with Dr. Alivisatos in October 2013, the Committee was asked to make improvement of accident/incident investigations a priority. The response has included:

- Accident/incident investigation principles were approved and implemented;
- Engagement of Line Managers in the investigation process improved through just-in-time training and quality assurance feedback and input throughout the process, so there are no surprises at the end. This has reduced the time to complete investigations. The Root Cause analysts provide their results to the Line Managers, who develop the Corrective Actions and accept ownership of them.
- CHESSE database improved the injury review process;
- Accident Preventability analysis has been launched;
- Lessons Learned/Best Practices system was reviewed;
- Issues Management was reviewed; and
- CATS Quick Entry feature added to facilitate tracking of corrective actions.

Dr. Alivisatos asked for examples of how incident investigations have improved. Marty White responded that the electrical shock investigation at Nuclear Science Division included Line Management involvement and there were no surprises at the end. NSD was quite pleased with the process. Jim Floyd commented that the process is better, but could still be improved. Dr. Alivisatos asked whether improvements were being tracked. He remembered hearing concerns from Division Directors that the investigation process was superficial and took too long. Jim Floyd responded that the investigation process still takes a long time, but it is not superficial. For example, a barrier analysis was performed for the oil incident at NSD. John Christensen commented that there had been discussion about having Divisions who participate in significant investigations present the results to SAC, but this has not occurred. Peter Seidl agreed that we need to have these discussions at future SAC meetings. Dr. Alivisatos said that he received feedback from Qualified Electrical Workers that they want more information about electrical incidents. The incident investigation principles set a framework for how we want to do investigations, but SAC needs to continue to work on tracking whether we are actually implementing the principles. He asked whether we are still having problems with workers being afraid to report events and participate in investigations. Marty White responded that during the electrical shock investigation, there was some fear initially, but NSD believes they received honest accounts, and there were no negative repercussions for the participants.

In October 2013, SAC met with Glenn Kubiak. Glenn asked that SAC work on enhancing Supervisor and Management engagement in safety and providing a “1-stop-shopping” experience to help Principle Investigators get all the safety information and approvals they need to start new projects and activities. Since then, the Work Planning and Control system has been designed to provide central portal for organizing work authorizations and providing hazard control information. The system was developed with SAC and user group input. The beta test and soft launch have been completed, and implementation is beginning. Dr. Alivisatos asked for feedback on how the implementation is going. Martin Neitzel responded that the system had a good look and feel, and is about 80% user-friendly. There are still some software bugs that need to be fixed. Using the WPC system helps people think through the process of selecting their hazards and controls. Subject Matter Experts are alerted when higher hazard Activities are being developed and are responding with help. Laser Safety Officer Greta Toncheva has been particularly helpful. Dr. Alivisatos asked how well the system works for communicating safety responsibilities to new people and early career researchers. The response was that it is too early to tell, because Activity Leads are just starting to add workers to their Activities. WPC should help to reduce confusion about which work authorizations are generating which training requirements.

Other related SAC/EHS efforts have included transitioning bioauthorizations to WPC, discussing the future of safety walkarounds, and efforts to develop tools for lab managers.

## **ESH Peer Reviews**

The most recent Peer Reviews were for Nuclear Science Division, Engineering Division, and Facilities Division. The NSD and Engineering Directors have provided feedback to SAC. We will be hearing from the Facilities Director soon.

The topics of the reviews were selected by the Division Directors. Some of the topics that have been covered in the reviews included:

- Supervisor span of control;
- Supervisor – Work Lead arrangements;
- Training of new staff;
- ISM for matrixed staff;
- Flow of ISM down through the organization;
- Division Director responsibilities;
- Safety communication; and
- Balance between safety and scope, schedule, and budget in construction projects.

Dr. Alivisatos asked whether the topics selected for review included issues that, if corrected, could have prevented some recent incidents. Henrik von der Lippe responded that the Engineering Division review looked at communication between matrixed employees and their Line supervisors, and that Engineering Division is pushing for a more active safety role by Engineering Line Management, which could be a good preventative measure. There is a higher level of respect for matrixed employee safety concerns from Host Divisions when the supervisors are involved, particularly in Stop Work situations. Dr. Alivisatos said that the recent UC Climate survey showed that some LBNL people feel like they are not encouraged to raise concerns, and we want supervisors to encourage and welcome people for speaking out. Henrik added that Engineering Division is also looking at how to improve their outreach to help other Divisions with safety issues where Engineering Division has some leadership responsibility, such as pressure safety and electrical safety.

Dr. Alivisatos suggested that SAC include people outside LBNL on the Peer Review teams. Jim Floyd said that we could ask Division Directors to recommend external peers that they might want on their review teams. LBNL already has a strong scientific peer review culture, but most scientific reviews don't include safety. SAC has been inviting other LBNL Division Directors to participate, but some Divisions may have more cultural affinity with similar Divisions at other Labs, and we could learn some best practices. Dr. Alivisatos will talk to the Division Directors and think about how we might compensate external reviewers.

Peter Seidl proposed that moving forward, SAC would perform two Peer Reviews per year. There are 6 Associate Lab Directorates. The reviews can be scheduled so that each Directorate receives some type of review at least every 3 years. The reviews can focus on particular Divisions or cross-division issues within a Directorate. Divisions will be selected for review based on a combination of risk level and time since last review, following discussion with the ALD. Peter Seidl is talking to the ALDs for Basic Energy Sciences and Life Sciences. Horst Simon was concerned that the proposed schedule will take too long to get through all the Divisions. Jim Floyd commented that while the Peer Review process requires less data collection for Divisions being reviewed than the old MESH reviews, they are labor-intensive for the review teams. Peter Seidl agreed that SAC doesn't have the resources to conduct more than 2 Peer Reviews per year.

## Electrical Safety

There are many changes to electrical safety, either recently completed or currently in process, including:

- Electrical Safety Subcommittee expanded, charter updated;
- Electrical Equipment Safety Program – high-risk equipment being inspected;
- Lockout/Tagout (LOTO) chapter revised, training restructured, subcontractor permit program improved;
- Authority Having Jurisdiction (AHJ) authority restructured;
- Electrical Safety Advisory Board formed;
- Electrical Safety chapter being revised; and
- Electrical Safety Improvement Plan being developed.

SAC has received regular updates from the electrical safety experts (Mark Scott/Stephanie Collins/Bob Mueller/Henrik von der Lippe). Dr. Alivisatos asked about how SAC interfaces with the Division Safety Coordinators. At a recent brown-bag meeting with the DSCs, Dr. Alivisatos received a lot of feedback that Divisions were concerned that LBNL may be more concerned with documenting compliance rather than addressing risks. John Christensen responded that there has been a fear of change and confusion among the researchers who are concerned that they may not be allowed to do things that they believe they have been doing safely. There has been uncertainty about the requirements for Qualified Electrical Workers to perform certain types of work, and concern about the process for researchers to become QEWs or pay for QEW assistance. The Division Director electrical safety walkthroughs are helping to improve communications. Dr. Alivisatos is concerned that the controls may not be adequately graded to the level of hazards, and would like to ensure that the controls are fine-tuned through the Work Planning and Controls system.

Dr. Alivisatos recognized that researchers expect to be able to solve their own problems, but they also need to be protected from getting into trouble by tackling problems beyond their expertise. We want to change the culture so researchers know when to ask for help. In some cases, the researcher may be the expert on a unique piece of equipment. Dr. Alivisatos said that in his days as a graduate student, he sometimes worked on “home built” equipment and didn’t really get adequate safety training. He wants to be sure that early career people get the information they need about hazard thresholds and training needs.

A general discussion of electrical safety followed: Jim Floyd commented that electrical work is ubiquitous at LBNL, and there is incredible diversity in the breadth of experience and ability of workers. Most workers have adequate knowledge to perform their work. We need to identify the people who are at risk and get management involvement in helping them. Scott Taylor said we need to work on how to help people get equipment fixed. John Christensen said there are concerns about the cost for getting QEW assistance, and LBNL should consider making QEW assistance a generally supported overhead service, like hazardous waste pick-up, to encourage use. Betsey McGowan added that she is also hearing concerns about the cost of training. There was also a concern that California does not require contractors to follow NFPA 70E, which makes it difficult for LBNL to enforce the standards. Andreas Schmid said that there needs to be a better match between the content of electrical safety training and the work people are doing. Peter Seidl commented that Division Directors should be involved and take ownership of their electrical safety programs. Senior people should mentor new people to build a safety culture. Dr. Alivisatos said that SAC could be a force or great good by seeking opportunities for systemic risk reduction and act as ambassadors for safety. Jim Floyd agreed that electrical safety is a leading issue to identify gaps in our safety culture, find pockets of risk, and improve management systems.

The meeting was adjourned at 11:00 AM

Respectfully submitted, Patricia M. Thomas, SAC Secretary